

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A fuel cell system comprising:

a liquid fuel cell having an anode, a cathode and an electrolyte membrane put therebetween;

a fuel supply unit supplying liquid fuel to the anode;

an air supply unit supplying air to the cathode; and

a heat exchanger exchanging heat between the liquid fuel supplied by the fuel supply unit to the anode and an exhaust exhausted from the liquid fuel cell, wherein the exhaust is exhausted from the anode or both the cathode and the anode.

Claims 2-4 (Canceled).

Claim 5 (Previously Presented): The fuel cell system of claim 1, wherein:

the fuel supply unit further comprises a mixing container mixing the liquid fuel and the exhaust so as to form a liquid mixture in advance.

Claim 6 (Canceled).

Claim 7 (Previously Presented): The fuel cell system of claim 1, wherein:

the liquid fuel cell is a direct methanol fuel cell.

Claim 8 (Currently Amended): A fuel cell system comprising:

a liquid fuel cell having an anode, a cathode and an electrolyte membrane put therebetween;

a fuel supply unit including a mixing container mixing liquid fuel and an exhaust exhausted from the liquid fuel cell so as to form a liquid mixture, the liquid mixture being supplied to the anode;

an air supply unit supplying air to the cathode; and

a heat exchanger connected to the mixing container so as to exchange heat between ambient air and the liquid mixture in the mixing container.

Claim 9 (Previously Presented): The fuel cell system of claim 8, wherein:
the mixing container is configured so that the exhaust passes through the liquid mixture housed in the mixing container, such that gas fractions in the exhaust are separated.

Claim 10 (Previously Presented): The fuel cell system of claim 8, further comprising:
a second mixing container communicated with the mixing container wherein the liquid mixture is supplied from the second mixing container to the anode.

Claim 11 (Previously Presented): The fuel cell system of claim 8, further comprising:
a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the anode.

Claim 12 (Previously Presented): The fuel cell system of claim 8, further comprising:
a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode.

Claim 13 (Previously Presented): The fuel cell system of claim 8, further comprising:
a second heat exchanger exchanging heat between the liquid mixture supplied by the
fuel supply unit and an exhaust exhausted from the cathode and the anode.

Claim 14 (Canceled).

Claim 15 (Previously Presented): The fuel cell system of claim 8, wherein:
the liquid fuel cell is a direct methanol fuel cell.

Claim 16 (Currently Amended): A fuel cell system comprising:
a liquid fuel cell having an anode, a cathode and an electrolyte membrane put
therebetween;
a fuel supply unit including a mixing container mixing liquid fuel and an exhaust
exhausted from the liquid fuel cell so as to form a liquid mixture, the liquid mixture being
supplied to the anode;
an air supply unit supplying air to the cathode;
a heat exchanger exposed to an ambient air; and
a circulation unit circulating the liquid mixture between the mixing container
and the heat exchanger so as to exchange heat between the ambient air and the liquid
mixture in the mixing container.

Claim 17 (Previously Presented): The fuel cell system of claim 16, wherein:
the mixing container is configured so that the exhaust passes through the liquid
mixture housed in the mixing container, such that gas fractions in the exhaust are separated.

Claim 18 (Previously Presented): The fuel cell system of claim 16, further comprising:

a second mixing container communicated with the mixing container wherein the liquid mixture is supplied from the second mixing container to the anode.

Claim 19 (Previously Presented): The fuel cell system of claim 16, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the anode.

Claim 20 (Previously Presented): The fuel cell system of claim 16, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode.

Claim 21 (Previously Presented): The fuel cell system of claim 16, further comprising:

a second heat exchanger exchanging heat between the liquid mixture supplied by the fuel supply unit and an exhaust exhausted from the cathode and the anode.

Claim 22 (Canceled).

Claim 23 (Previously Presented): The fuel cell system of claim 16, wherein: the liquid fuel cell is a direct methanol fuel cell.